DEPARTMENT OF TRANSPORTATION
DIVISION OF ENGINEERING SERVICES
Office of Structural Materials
Quality Assurance and Source Inspection

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Contract #: 04-0120F4
Cty: SF/ALA Rte: 80 PM: 13.2/13.9
File #: 1.28

WELDING INSPECTION REPORT

Resident Engineer: Siegenthaler, Peter
Address: 333 Burma Road
City: Oakland, CA 94607

Report No: WIR-018329
Date Inspected: 22-Nov-2010

Project Name: SAS Superstructure
Prime Contractor: American Bridge/Fluor Enterprises, a JV
Contractor: American Bridge/Fluor Enterprises, a JV

OSM Arrival Time: 630
OSM Departure Time: 1500
Location: Job Site

CWI Name: See below

Inspected CWI report:	☑ Yes	☐ No	☐ N/A	**CWI Present:**	☑ Yes	☐ No	
Electrode to specification:	☑ Yes	☐ No	☐ N/A	**Rod Oven in Use:**	☑ Yes	☐ No	☐ N/A
Qualified Welders:	☑ Yes	☐ No	☐ N/A	**Weld Procedures Followed:**	☑ Yes	☐ No	☐ N/A
Approved Drawings:	☑ Yes	☐ No	☐ N/A	**Verified Joint Fit-up:**	☑ Yes	☐ No	☐ N/A
				Approved WPS:	☑ Yes	☐ No	☐ N/A
				Delayed / Cancelled:	☐ Yes	☑ No	☐ N/A

Bridge No: 34-0006
Component: SAS OBG

Summary of Items Observed:

The Quality Assurance (QA) Inspector, Rick Bettencourt was on site at the job site between the times noted above. The QA Inspector was on site to randomly observe the in process welding and inspection of the weld joints identified as 8W/9W-A1-A5 and the following observations were made:

8W/9W-A1-A5

Upon the arrival of the QA Inspector in the am it was observed the above identified weld joint was fit up with the approved temporary attachments or fit up gear in place. Upon the arrival of the QA Inspector, the QC Inspector Bonifacio Daquinag informed the QA Inspector the planar misalignment inspection had been previously performed by SE QC and just required QA verification. The QC Inspector presented the QA Inspector with a planar misalignment map of the areas previously located by QC Bonifacio Daquinag. The QA inspector noted the map indicated the planar off set was broken down to 10 locations through out the transverse weld joint. The QA Inspector reviewed the document and proceeded to perform the random QA verification of the weld joint. The QA Inspector observed areas indicated and performed QA verifications working together with the QC Inspector. After the inspection was completed the QA Inspector noted a total of 1615mm of planar offset at 10 separate locations. The QA Inspector asked the ABF Welding Superintendent Dan Ieraci if he intended to correct the unacceptable planar misalignment (see summary of conversations). The QA Inspector and the QC Inspector recorded the following locations of planar misalignment:

The unacceptable planar misalignment was located at the following 10 locations:

1.) y=0mm-70mm (20mm deck section) 0-2mm misalignment (70mm in length)
2.) y=520mm-545mm (20mm deck section) 0mm-2mm misalignment (25mm in length)

3.) y=2320mm-2700mm (14mm deck section) 0mm-2mm misalignment (380mm in length)
4.) y=14380mm-14870mm (14mm deck section) 0mm-2mm misalignment (490mm in length)
5.) y=18420mm-18700mm (14mm deck section) 0mm-2mm misalignment (280mm in length)
6.) y=21280mm-21310mm (14mm deck section) 0mm-2mm misalignment (30mm in length)
7.) y=24830mm-24880mm (14mm deck section) 0mm-2mm misalignment (50mm in length)
8.) y=24880mm-24940mm (14mm deck section) 2mm-4mm misalignment (60mm in length)
9.) y=24940mm-25060mm (14mm deck section) 0mm-2mm misalignment (120mm in length)
10.) y=27170mm-27280mm (20mm deck section) 0mm-2mm misalignment (110mm in length)

Total planar misalignment 1615mm of the total length of the weld joint.

The QA Inspector and the SE QC Inspector Bonifacio Daquinag performed dimensional verification of the gaps at the steel backing. The QA Inspector noted the 7 separate areas where the gap at the steel backing exceeded 2mm. The QA Inspector noted the largest gap was 3mm and no gap exceeded 3mm for the above identified transverse weld splice. The QA Inspector was informed by these Lead QC Leonard Cross the contractor will write and submit and internal non conformance report in addition to a request to weld repair over the excessive gaps at the steel backing.

Gaps between the steel backing and bevel are located at the following locations:

1.)	Y=0mm-110mm	8W	2.5mm
2.)	Y=2030mm-2050mm	8W	2.5mm
3.)	Y=9130mm-9170mm	8W	2.5mm
4.)	Y=18210mm-18745mm	8W	2.5mm
5.)	Y=21130mm-21170mm	8W	2.5mm
6a.)	Y=25185mm-25245mm	9W	2.5mm
6b.)	Y=25250mm-25290mm	8W	2.5mm
7.)	Y=25170mm-25280mm	8W	3mm

8W/9W-A1-A5
Upon the arrival of the QA Inspector in the am it was observed the above identified weld joint was fit up with the approved temporary attachments or fit up gear in place. The QA Inspector randomly observed the ABF welders identified as #9677 and #nag2930 begin performing the SMAW full length tack weld. The QA Inspector was informed by the American Bridge/Fluor (ABF) welding Superintendent Dan Ieraci no runoff tabs would be utilized on this transverse weld splice. The QA Inspector randomly observed the SE QC Inspector Bonifacio Daquinag was on site monitoring the in process SMAW tack welding. The QA Inspector randomly observed and noted the SMAW parameters for both of the above identified ABF welders and they were 126 Amps while utilizing 1/8” E7018 low hydrogen electrodes. The QA Inspector randomly observed the full length tack weld was not completed on this date. The QA Inspector randomly observed the ABF welders begin welding the ends of the weld joint. The QA Inspector noted the contractor will not utilize weld tabs rather back step or cascade the submerged arc welding.

Summary of Conversations:
The QA Task Lead Inspector Bill Levell informed the QA Inspector the Structure Materials Representative Patrick Lowry gave the verbal approval to perform the welding of the planar off set and to weld and repair the gaps between the steel backing and the bevel that exceed 2mm.

WELDING INSPECTION REPORT

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Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Nina Choy 510-385-5910, who represents the Office of Structural Materials for your project.

Inspected By:	Bettencourt,Rick	Quality Assurance Inspector
Reviewed By:	Levell,Bill	QA Reviewer